



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,192	07/31/2001	Tracy D. Powers	P5387	3966
32658	7590	12/29/2005	EXAMINER	
HOGAN & HARTSON LLP ONE TABOR CENTER, SUITE 1500 1200 SEVENTEEN ST. DENVER, CO 80202			REFAI, RAMSEY	
			ART UNIT	PAPER NUMBER
			2152	

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/919,192

Applicant(s)

POWERS ET AL.

Examiner

Ramsey Refai

Art Unit

2152

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-11 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-11 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. In view of the Appeal Brief filed on October 12, 2005, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

2. Claims 1-7, 9-11, and 17-20 remain pending further examination.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 1-7, 9-11, and 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 7, and 17, it is not clear where the reconfiguration request is coming from. In claim 7, it is not clear who/what is transmitting the recommended reconfiguration and where it is being sent. Clarification is respectfully requested.

Claim 7 recites the limitations “the reconfiguration system” in line 15 and “the first” in line 20. Claim 17 recites the limitations “the reconfiguration system” in line 16. There is insufficient antecedent basis for these limitations in the claims.

Claims 2-6, 9-11, and 18-20 are dependent on a rejected claim, therefore are rejected under the same rationale as their respective independent claims.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 4, 5, 7, 9-11, and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Axberg et al (U.S. Patent No. 6,009,466).

7. As per claim 1, Axberg et al teach a remote reconfiguration computer system, comprising:

a storage management host installed in a client data storage system (**manager**), wherein the client data storage system includes a data storage subsystem having a first configuration and comprising at least one master storage unit (**storage controllers**) for storing data and providing access to the stored data and one host (**system hosts**) linked to the master storage unit and further

wherein the storage management host is communicatively linked to and adapted to provide remote access to the master storage unit and the host (**Figure 1, column 4, lines 2-55**); and

a reconfiguration center communicatively linked to the storage management host (**Figure 3, column 6, lines 1-20; storage management program stored on manager**), the reconfiguration center being located remote to the client data storage system and configured for receiving a reconfiguration request for the client data storage system (**column 11, lines 1-18; client initiates reconfiguration process**) and for, in response to the received reconfiguration request, transferring a logical implementation of a second configuration to the client data storage system via the storage management host, wherein the client data storage system is operable to process the logical implementation to configure the data storage subsystem in the second configuration, wherein the logical implementation is selected or created based on the reconfiguration request and the first configuration (**abstract, column 2, lines 30-66, column 11, lines 14-16; user can modify existing storage network configuration using a GUI**)

8. As per claim 4, Axberg et al teach a second data storage subsystem having at least one master storage unit and at least one host linked to the master storage unit and wherein the master storage unit of the second data storage subsystem is a different type of data storage device than the master storage unit of the other data storage subsystem (**column 1, lines 28-43, column 4, lines 56-67**)

9. As per claim 5, Axberg et al teach wherein the transferred logical implementation includes executables that affect a change in the first configuration selected from the group consisting of a logical unit number (LUN) size change, cache blocking, establishing hot

Art Unit: 2152

standby, changing RAID, logically moving the master storage unit or a portion thereof, mainframe device type changing, adding channels, and increasing performance (**abstract, column 1, lines 28-43**).

10. As per claim 7, Axberg et al teach a method for remotely reconfiguring a data storage system, comprising:

installing a storage management host within a client data storage system and communicatively linking the storage management host to a remotely-located reconfiguration system and to a master storage unit in the client data storage system (**Figure 1, column 4, lines 2-55**);

monitoring the client data storage system (**column 7, lines 2-9**);

based on the monitoring, transmitting a recommended reconfiguration for the master storage unit (**abstract, column 7, lines 2-35**);

at the remotely-located reconfiguration system, receiving a reconfiguration request for the client data storage system (**column 11, lines 1-18; client initiates reconfiguration process**);

in response to the receiving of the reconfiguration request, determining a first configuration of the master storage unit with the remotely-located reconfiguration system (**abstract, column 2, lines 30-66, column 11, lines 14-16; user can modify existing storage network configuration using a GUI**);

transferring from the reconfiguration system a logical implementation of a data storage system configuration to the storage management host, the logical implementation being generated based on the reconfiguration request, the first configuration, and results of the monitoring and executing the logical implementation to reconfigure the master storage unit from the first to a second configuration (**abstract,**

column 2, lines 30-66, column 11, lines 14-16; user can modify existing storage network configuration using a GUI).

11. As per claim 9, Axberg et al teach identifying a predetermined level of reconfiguration services from a plurality of service level options and creating the logical implementation based on the identified level of reconfiguration services **(column 7, lines 2-24).**

12. As per claim 10, Axberg et al teach the service level options comprises services selected from the group consisting of changing logical unit number (LUN) size, cache blocking, establishing hot standby, changing RAID, logically moving the master storage unit or a portion thereof, changing mainframe device type, adding channels, increasing performance, and providing ongoing configuration monitoring **(abstract, column 1, lines 28-43).**

13. As per claim 11, Axberg et al teach remotely verifying and testing the second configuration **(column 13, lines 44-59).**

14. As per claim 17, Axberg et al teach a method for remotely reconfiguring a data storage system, comprising:

installing a storage management host within a client data storage system, the client data storage system having a first configuration **(Figure 1, column 4, lines 2-55);**

communicatively linking the storage management host to a remotely-located reconfiguration system and to a master storage unit in the client data storage system (**abstract, Figure 1, column 4, lines 2-55**); ;

receiving a reconfiguration request for the client data storage system at the remotely-located reconfiguration system (**column 11, lines 1-18; client initiates reconfiguration process**);

determining with the remotely-located reconfiguration system a first configuration of the client data storage system including the master storage unit (**column 7, lines 1-35, abstract**)

identifying a level of reconfiguration services from a plurality of service level options for the client data storage system (**abstract**);

defining a logical implementation for the client data storage system based on the identified level of reconfiguration services and the first configuration (**abstract, column 11, lines 11-19**);

transferring from the reconfiguration system a logical implementation of a data storage system configuration to the storage management host; and executing the logical implementation to reconfigure the master storage unit from a first to a second configuration (**abstract, column 2, lines 30-66, column 11, lines 14-16; user can modify existing storage network configuration using a GUI**)..

15. As per claim 18, Axberg et al teach the service level options comprise services selected from the group consisting of changing logical unit number (LUN) size, cache blocking, establishing hot standby, changing RAID, logically moving the master storage unit or a portion thereof, changing mainframe device type, adding channels, increasing performance, and providing ongoing configuration monitoring (**abstract, column 1, lines 28-43**)..

16. As per claim 19, Axberg et al teach remotely verifying and testing the second configuration (column 13, lines 44-59).

17. As per claim 20, Axberg et al teach prior to the receiving the reconfiguration request, monitoring the client data storage system and based on the monitoring, issuing a recommended reconfiguration for the client data storage system (column 7, lines 2-13).

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Axberg et al (U.S. Patent No. 6,009,466 in view of Vacon et al (U.S. Patent No. 5,151,895).

20. As per claims 2 and 3, Axberg et fail to show a computer system, wherein the storage management host is a terminal server configured to provide Ethernet connection to a local area network (LAN) connected to the host and the master storage unit and further configured to provide a serial connection with the master storage unit.

21. However, Vacon et al show a terminal server device provides connection between terminals which operate asynchronously to transmit data to and receive data from the LAN

typically dedicated to a plurality of terminals via serial data lines originating from the terminal server and terminating at respective terminals. The terminal server also provides a node for connection to the LAN. The LAN provides for packet data transmission between the terminal server and the host computer (**column 1, lines 24-34**). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teachings of Axberg et al, and Vacon et al to create a remote reconfiguration system wherein the storage management host is a terminal server that provides Ethernet connection because doing so would help establish a communication between a number of terminals and host computers.

22. Claim 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Axberg et al (U.S. Patent No. 6,009,466) in further view of "Official Notice".

23. As per claim 6, Axberg et al show that a reconfiguration computer system can include a modem (**column 1, lines 13-14 and column 15 lines 67- column 16 line 3**).

24. Axberg et al fail to show the use of a dialback modem wherein the dialback modem is adapted to respond to a connection initiated from the modem by requesting entry of a password, to verify an entered password, to upon verification of the password disconnect the connection and initiate a connection to the modem. "Official Notice" is taken that both the concept and advantages of using a dialback modem is well known and expected in the art. The secure dialback modem is configured to limit connection attempts, e.g., permit only two attempts, before automatic disconnect. The connection is then broken. The modem at the monitored system then dials back the service center. It would have been obvious to one of ordinary skill in the art at the

time of the applicant's invention to use a dialback modem in a reconfiguration system to authenticate a user in order to prevent unauthorized use.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Murphy et al (U.S. Patent No. 6,944,654), Zahavi et al (U.S. Patent No. 6,886,020).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Refai whose telephone number is (571) 272-3975. The examiner can normally be reached on M-F 8:30 - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on (571) 272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RR 
December 21, 2005

Ramsey Refai
Examiner
Art Unit 2152


BUNJOB JARDENCHONWANIT
SUPERVISORY PATENT EXAMINER